Dir. Inst. Micro

PZ.

Personal Memo from:
JOSHUA LEDERBERG

T. H. Umbreit et al.

JUN 9 1986

"pinpoint colonies"

Thank you for the xeroprint.

I wrote you a/c your title hinted you were looking into metal-"induced" small colony variants, cf.

Weed, L.L., J. Bact. 67:27 (1954) ("induced" by copper.)

One of my students looked into this at the time, rather fruitlessly.

Your paper gives no support to that observation; but failure to get his+ phenotypes on replica-plating doesn't really exclude it.

Enclosed a more novel wrinkle on metal-resistance via gene amplification. The connection to mutagenic induction is remote (if any.)

Yours,

[illegible signature]

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Ames Tests of Toxic Materials: Pinpoint Colonies Formed in Tests of Chromic Oxide

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Ames tests on toxic materials can result in formation of pinpoint colonies. Some compounds, such as metal salts, are mutagenic only at high concentrations, and the presence of numerous and large pinpoint colonies may interfere with test results. Replicate plating onto histidine-free medium can distinguish pinpoint colonies from true rever-

ble to choose colonies for transfer to minimal agar medium that lacks histidine (or test agent) to determine the phenotype of the colony by its ability to grow in